

# Unit Planning Guide: Grade 5 Unit 1 of 8

<b>Unit Title:</b> Place Value	<b>Pacing (Duration of Unit):</b> 5 weeks
<b>Grade:</b> 5	<b>Buffer Day(s):</b> 1 week

## Desired Results

### Transfer Goals (Priority practice standards in **bold**)

*Students will be able to independently use their learning to:*

- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. **Model with mathematics.**
- MP.5. Use appropriate tools strategically.
- MP.6. **Attend to precision.**
- MP.7. **Look for and make use of structure.**
- MP.8. Look for and express regularity in repeated reasoning.

### Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

#### Prerequisite Standards:

- 4.NBT.1: Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that  $700 \div 70 = 10$  by applying concepts of place value and division.*
- 4.NBT.3: Use place value understanding to round multi-digit whole numbers to any place.
- 4.NBT.4: Fluently add and subtract multi-digit whole numbers using the standard algorithm.
- 4.NF.5: Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. *For example, express  $\frac{3}{10}$  as  $\frac{30}{100}$ , and add  $\frac{3}{10} + \frac{4}{100} = \frac{34}{100}$ .*
- 4.NF.6: Use decimal notation for fractions with denominators 10 or 100. *For example, rewrite  $0.62$  as  $\frac{62}{100}$ ; describe a length as  $0.62$  meters; locate  $0.62$  on a number line diagram.*
- 4.NF.7: Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual model.

#### WIDA for English Language Learners

Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting

Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**

In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports.

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### Standards (Priority Standards in **bold**):

- 5.NBT.1: Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $\frac{1}{10}$  of what it represents in the place to its left.
- 5.NBT.2: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
- **5.NBT.3: Read, write, and compare decimals to thousandths.**
  - **5.NBT.3a: Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g.,  $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (\frac{1}{10}) + 9 \times (\frac{1}{100}) + 2 \times (\frac{1}{1000})$ .**
  - **5.NBT.3b: Compare two decimals to thousandths based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.**
- **5.NBT.4: Use place value understanding to round decimals to any place.**

### Meaning (\*Mostly assessed through Performance Tasks/Assessments)

#### Big Ideas:

- The relationships among the digits in a number follow specific patterns (multiplication and division in Base10).
- Place value helps us to understand the size of numbers in order to compare and/or round them.
- Numbers can be represented in many forms.

**Essential Questions:** (Questions which frame ongoing and important inquiries about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)

- How and why do we compare numbers?
- How are decimals used in the real world? (How do they affect our daily lives?)
- What is the “Power” of 10?
- How does place value help us to communicate in math?

### Acquisition (\*Mostly assessed through traditional summative assessments)

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**Knowledge:** Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.

***Students will know ...***

- Place value relationships
- In a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $\frac{1}{10}$  of what it represents in the place to its left.
- Patterns in the number of zeros of the product when multiplying a number by powers of 10
- Patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10.

**Key Academic Vocabulary:**

- Whole, Tenths, Hundredths, Thousandths, Decimal, Decimal Point, Compare, <(Less than), >( Greater than), =( Equal to)
- Increasing, Decreasing
- Digits, Value, Exponent, Power, Base 10
- Standard Form, Expanded Form, Name Form

**Skills:** The discrete skills and process students should be able to use independently.

***Students will be skilled at:***

- Reading and writing decimals to the thousandths using base ten numerals, number names and expanded form. (Remembering, Applying)
- Comparing two decimals to thousandths using >, =, and < symbols to record the results of comparisons. (Understanding, Applying)
- Rounding decimals to any place. (Applying)
- Explaining patterns when multiplying and dividing by powers of 10 (Understanding)
- Using whole-number exponents to denote powers of 10. (Applying)
- Recognizing place value relationships. (Analyzing)

**Resource Suggestions:**